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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/840,297	04/24/2001	Theodore F. Rabenko	1875.0620001	4380

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EXAMINER

BRINEY III, WALTER F

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 02/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/840,297

Applicant(s)

RABENKO ET AL.

Examiner

Walter F Briney III

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☒ Claim(s) 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

Claim 21 is objected to because of the following informalities: a period is missing at the end of the claim sentence.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites the limitation "**said linear**" in line 6 of the claim. There is insufficient antecedent basis for this limitation in the claim. For the purpose of this action, the examiner assumes that "**said linear**" should be "said linear amplifier."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bissell et al. (US Patent 6,658,108) in view of Schultz (US Patent 3,334,293) in view of Pennington et al. (US Patent 5,619,080) and further in view of Koizumi (US Patent 5,649,006).

Claim 19 is limited to a **system for supplying power over a home phone line network in a manner that is interoperable with other voice and data service operating over the same home phone line network**. Bissell discloses a **power supply coupled to the home phone line network** (figure 1, element 24). Bissell discloses a **power supply** that generates an AC signal (i.e. an **AC signal generator**) (column 2, lines 33-43). Bissell discloses a **plurality of electronic device coupled to the home phone line network** (figure 1, element 25, see ellipses). Bissell discloses generating an out-of-band AC signal (column 2, lines 33-43). Therefore, Bissell anticipates all limitations of the claim with the exception **wherein said AC signal generator generates an AC signal with a fundamental frequency spectrally centered between 20 kHz and 200 kHz**. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to generate an AC signal with a fundamental frequency centered between 20 kHz and 200 kHz. Applicant has not disclosed that such a spectral arrangement provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with a spectral center of 100 Hz as disclosed by Bissell, because as long as the center is out-of-band, the function of the AC generator is the same. Therefore, it would have been

obvious to a person of ordinary skill in the art to modify Bissell to use a center frequency between 20 kHz and 200 kHz. Bissell discloses generating an AC signal, but does not disclose the details of the generator. Therefore, Bissell makes obvious all limitations of the claim with the exception **wherein the power supply comprises a first band pass filter**. Schultz teaches that when multiplying a frequency to be delivered to a load, it is necessary to filter out all frequencies that will not be powering the load (column 1, lines 16-28) using a band pass filter (figure 1, elements 9 and 11). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a band pass filter as taught by Schultz for the purpose of preventing frequencies not meant to power a load from delivering power to load. Therefore, Bissell in view of Schultz makes obvious all limitations with the exception **wherein each plurality of electronic devices comprises a second band pass filter**. Pennington teaches removing harmonics from lines delivering power by way of a band pass filter (figure 1, element 16A, B, C) connected to each load (figure 1, elements 14A, B, C) because even with clean AC power supplied some loads can cause harmonic feedback when energized (column 1, lines 13-19). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a bandpass filter with every load as taught by Pennington for the purpose of removing harmonic feedback caused by energized loads. Therefore, Bissell in view of Schultz and further in view of Pennington makes obvious all limitations of the claim with the exception of **an AC/DC converter**. Bissell discloses supplying AC power to a fax machine over the telephone lines, where it would typically derive DC power from an AC wall outlet because it creates a more convenient system

(column 1, line 53-column 2, line 5), but does not disclose what the modules do with the AC power supplied. Koizumi teaches a fax device that converts AC power into operating DC power using an AC/DC converter (figure 4). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide AC power to a fax machine that typically connects to an AC wall outlet as taught by Bissell, where the fax machine converts the AC power to DC using an AC/DC converter as taught by Koizumi, for the purpose of creating a more convenient system. Because Bissell in view of Schultz in view of Pennington and further in view of Koizumi makes obvious all the above limitations it follows that, inherently, **said first band pass filter removes undesired harmonics from said AC signal to generate a filtered AC signal for transmission on the home phone line network; inherently, each of said second band pass filters receives said filtered AC signal from the home phone line network and passes said filtered AC signal to a corresponding AC/DC converter; inherently, each of said corresponding AC/DC converters converts said filtered AC signal into a DC signal for powering each of said plurality of electronic devices; and inherently, each of said second band pass filters prevents the introduction of undesired harmonics onto the home phone line network from said corresponding AC/DC converter.** Therefore, Bissell in view of Schultz in view of Pennington and further in view of Koizumi makes obvious all limitations of the claim.

Claims 1, 10, 23, and 25 are essentially the same as claim 19 and are rejected for the same reasons.

Claim 4 is limited to **the system of claim 1**, as covered by Bissell in view of Schultz in view of Pennington and further in view of Koizumi. Bissell discloses supplying 60-Hz AC voltage (figure 1, element 30) to the power source module (figure 1, element 24) (i.e. **wherein said power source is coupled to a residential AC utility power supply and wherein said power source is powered by said residential AC utility power supply**) (column 3, lines 52-64). Therefore, Bissell in view of Schultz in view of Pennington and further in view of Koizumi makes obvious all limitation of the claim.

Claim 15 is essentially the same as claim 4 and is rejected for the same reasons.

Claim 5 is limited to **the system of claim 1**, as covered by Bissell in view of Schultz in view of Pennington and further in view of Koizumi. Bissell discloses transforming one AC frequency into another AC frequency, but does not disclose any details of this process. Therefore, Bissell in view of Schultz in view of Pennington and further in view of Koizumi makes obvious all limitations of the claim with the exception **wherein the signal generator comprises a resonant mode power supply**. Schultz teaches converting a frequency to one of its harmonics using resonant circuits (figure 1, elements 5, 9, 11) (i.e. **wherein said AC signal generator comprises a resonant mode power supply**). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the frequency multiplier as taught by Schultz for the purpose of providing a power source module.

Claim 16 is essentially the same as claim 5 and is rejected for the same reasons.

Claim 9 is limited to **the system of claim 1**, as covered by Bissell in view of Schultz in view of Pennington and further in view of Koizumi. Therefore, Bissell in view of Schultz in view of Pennington and further in view of Koizumi makes obvious all limitations of the claim with the exception **wherein said AC signal has a voltage of less than 30 Vrms**. The examiner takes Official Notice of the fact that the Underwriters Laboratory standard (UL-1950) defining voltages applied to home phone lines must be below 30 Vrms is well known. It would have been obvious to one of ordinary skill in the art at the time of the invention to supply a voltage of less than 30 Vrms for the purpose of complying with UL-1950.

Claim 18 is essentially the same as claim 9 and is rejected for the same reasons.

Claim 11 is limited to **the system of claim 10**, as covered by Bissell in view of Schultz in view of Pennington and further in view of Koizumi. Bissell discloses a power receiving module (i.e. **a telephone adapter**) (figure 1, element 25) that supplies power to an electronic device (i.e. a telephone) (column 3, lines 52-64). Therefore, Bissell in view of Schultz in view of Pennington and further in view of Koizumi makes obvious all limitations of the claim.

Claim 12 is limited to **the system of claim 10**, as covered by Bissell in view of Schultz in view of Pennington and further in view of Koizumi. The examiner takes Official Notice of the fact that **VoIP telephones** are well known types of electronic devices. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide power to VoIP telephones for the purpose of removing the need to power the telephones from a separate network.

Claims 2, 3, 13, 14, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bissell in view of Schultz in view of Pennington in view of Koizumi and further in view of Beveridge (US Patent 6,393,105).

Claim 2 is limited to **the system of claim 1**, as covered by Bissell in view of Schultz in view of Pennington and further in view of Koizumi. Bissell discloses powering various networks including **cable networks**. Therefore, Bissell in view of Schultz in view of Pennington and further in view of Koizumi makes obvious all limitations of the claim with the exception **wherein said power source is coupled to an HFC/cable network**. The examiner takes Official Notice of the fact that cable networks comprised of hybrid fiber and coax are well known. Therefore, it would have been obvious to one of ordinary skill to situate the power distribution system of Bissell in a HFC cable network for the purpose of providing cable service over low loss optical fibers. Bissell also discloses receiving power from a power supply network, but does not disclose what happens in the event of a power failure. Therefore, Bissell in view of Schultz in view of Pennington and further in view of Koizumi makes obvious all limitation of the claim with the exception **wherein said power source is powered by a signal received from said HFC/cable network**. Beveridge teaches a way to provide backup power in the event that the main AC power source is lost by charging a battery with trickle current from a hybrid cable network (i.e. **wherein said power source is powered by a signal received from said HFC/cable network**) (column 4, line 55-column 5, line 16). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide backup battery power where the battery is recharged using trickle current from a

HFC/cable network as taught by Beveridge for the purpose of providing power in the case of AC power loss.

Claims 13 and 24 are essentially the same as claim 2 and are rejected for the same reasons.

Claim 3 is rejected for the same reasons as claim 2 (i.e. battery backup).

Claim 14 is essentially the same as claim 3 and is rejected for the same reasons.

Claims 6, 8, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bissell in view of Schultz in view of Pennington in view of Koizumi and further in view of Dusclaux (US Patent 4,901,038).

Claim 6 is limited to **the system of claim 1**, as covered by Bissell in view of Schultz in view of Pennington and further in view of Koizumi. Bissell discloses transforming one AC frequency into another AC frequency, but does not disclose any details of this process. Therefore, Bissell in view of Schultz in view of Pennington and further in view of Koizumi makes obvious all limitations of the claim with the exception **wherein the signal generator comprises an oscillator**. Dusclaux teaches providing AC power to a source using an **oscillator circuit** (figure 1, element 1) and a **linear amplifier** (figure 1, element 2). The oscillating portion is comprised of reactive elements L1, L2, and C1 that produce a signal of **sinusoidal** nature, the linear amplifier has an input for the oscillator power (figure 1, element Pe) (i.e. **linear amplifier amplifies said sinusoidal AC signal**). It would have been obvious to one of ordinary skill in the art to use an oscillator coupled with a linear amplifier as taught by Dusclaux for the purpose of providing an AC power signal to a load.

Claim 8 is limited to **the system of claim 1**, as covered by Bissell in view of Schultz in view of Pennington and further in view of Koizumi. For the same reasons as in claim 6, the AC power signal is sinusoidal. Therefore, Bissell in view of Schultz in view of Pennington in view of Koizumi and further in view of Dusclaux makes obvious all limitations of the claim.

Claim 17 is essentially the same as claim 8 and is rejected for the same reasons.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bissell in view of Schultz in view of Pennington in view of Koizumi and further in view of Fletcher (US Patent 3,899,745)

Claim 7 is limited to **the system of claim 1**, as covered by Bissell in view of Schultz in view of Pennington and further in view of Koizumi. Bissell discloses transforming one AC frequency into another AC frequency, but does not disclose any details of this process. Therefore, Bissell in view of Schultz in view of Pennington and further in view of Koizumi makes obvious all limitations of the claim with the exception **wherein said AC signal generator comprises a class-D amplifier**. Fletcher teaches amplifying an AC input (figure 1, element V1) into an AC output using a class-D amplifier (i.e. **wherein said AC signal generator comprises a class-D amplifier**) (abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the class-D amplifier as taught by Fletcher for the purpose of amplifying an AC input into an AC signal capable of driving a load.

Claims 20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bowen (US Patent 6,580,710) in view of Bissell.

Claim 20 is limited to a **residential gateway for providing power over a home phone line network**. Bowen discloses a **residential gateway** (figure 1, element 301), which transmits frequency multiplexed signals on a home phone-line distribution including POTS and home networking data signals. Therefore, Bowen includes a **home phone line network interface** and a **telephone interface**. The **home phone line interface transmits analog data signals over the home phone line network** (column 2, lines 44-46), and wherein said **telephone interface transmits analog voice signals over the home phone line network** (column 2, lines 40-42). Therefore, Bowen anticipates all limitations of the claim with the exception of a **power supply**. Bissell teaches supplying AC power in a frequency band that doesn't interfere with the signals on a telephone line for the purpose of allowing more convenient power distribution to network devices (i.e. **wherein said power supply generates an AC power signal over the home phone line network that does not interfere with said analog voice and data signals**) (column 1, line 53-column 2, line 18). It would have been obvious to one of ordinary skill in the art at the time of the invention to supply power to the network devices of Bowen using the power distribution scheme of Bissell for the purpose of providing convenient power distribution to network devices.

Claim 22 is rejected for the same reasons as claim 2.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bowen in view of Williamson (US Patent 6,477,249).

Claim 21 is limited to **the residential gateway of claim 20**, as covered by Bowen in view of Bissell. Bowen discloses a frequency multiplexed transmission

scheme (column 2, lines 35-46), however, does not disclose the details of how different frequency signals are combined onto home phone lines. Therefore, Bowen in view of Bissell makes obvious all limitations of the claim with the exception **wherein said telephone interface comprises a low pass filter to attenuate said AC power signal**. Williamson teaches using a low pass filter to split and combine low frequency signals with higher frequency signals (i.e **AC power signals**) for the purpose of creating a frequency multiplexed transmitter (abstract) (figures 2 and 3). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a LPF as taught by Williamson for the purpose of implementing the frequency multiplexing transmission of Bowen.

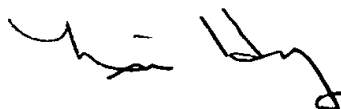
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter F Briney III whose telephone number is 703-305-0347. The examiner can normally be reached on M-F 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W Isen can be reached on 703-305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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